Correspondence

THE UNUSUAL WEATHER OF JANUARY 1963

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The unusual winter weather of 1962-63 has already found considerable comment. As always, when densely populated areas are struck by adverse weather conditions, there has been much speculation about climatic trends. Generally, however, the commentators forget to look at the broader picture. Often unusual anomalies are restricted to relatively small areas. In this connection it should be remembered that the area of the United States itself is only about 2 percent of the total surface of the earth.

If one looks at the anomalies of individual months or seasons on a hemispheric or global basis, one generally finds a very marked tendency for compensation. If one area is too warm there will be equal or larger areas being too cold and vice versa. During the winter of 1962-63, January had the most unusual aspects of weather [1]. It would, therefore, seem appropriate to place into the scientific record an anomaly chart of temperatures (° C.) (fig. 1). This shows the world-wide distribution of temperature departures from the 1931-60 normal. As has already been described, the central and eastern United States and most parts of central and western Europe had very notable negative temperature anomalies during this month. On the other hand, there were even larger areas which showed positive anomalies. Particularly remarkable are the positive departures in the eastern Greenland-Baffin Strait area, the high positive values in central Russia and in the area of Kamchatka. Nearly the whole of the North Pacific Ocean and considerable parts of the North Atlantic also had positive anomalies.

In the Southern Hemisphere, where data are scarce, the picture over the oceans is undoubtedly quite uncertain. No particularly notable anomalies were observed there; the chart rather presents the usual picture of a summer month.

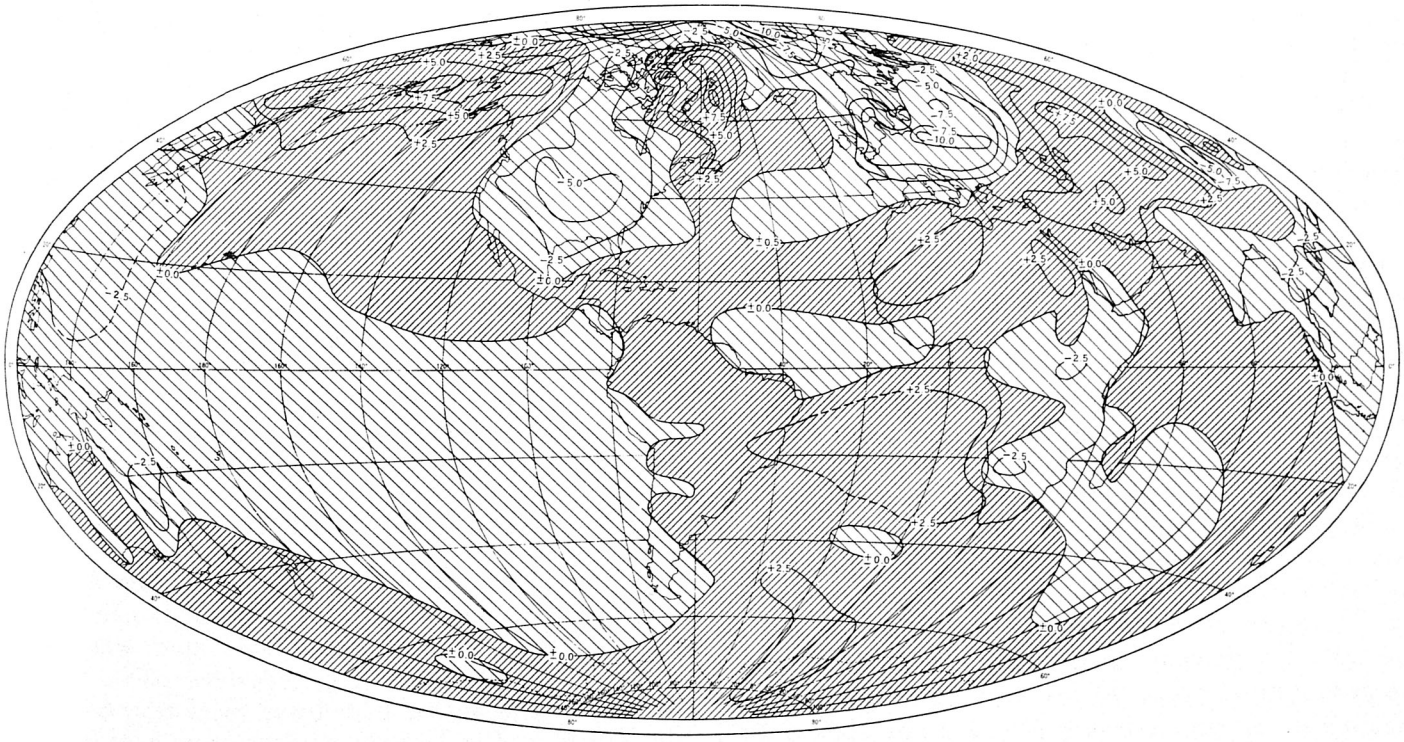

FIGURE 1.—Worldwide temperature anomaly, January 1963.

As regards the distribution in the Northern Hemisphere, it appears that the hemisphere *as a whole* was perhaps warmer than normal rather than colder. The major anomaly lies in the fact that the outbreaks of cold air from the polar regions, because of the displacement of the normal pressure centers, took place with higher frequency than usual in the areas showing the great negative departures. One could certainly not use this as evidence for man-made interferences as some have advocated.

Similar patterns have been observed in prior years during the period of meteorological record. Usually they were restricted to one or two months. Only if circulation anomalies of this type were sustained for a considerable length of time could one speak of a climatic fluctuation or trend. If it were possible for a permanent circulation pattern to establish itself in the particular fashion shown for January of 1963, one could readily envision that this might be similar to those that were prevalent during the formative stages of glaciation. For this reason it would be highly desirable if it were possible to attribute causes to anomalies of a short interval of time, such as January 1963, in order to gain a better insight into the meteorological phenomena that may have led to the ice ages.

I am obliged to Messrs. S. J. Roman and A. A. Karpovich for drawing the map accompanying this note from data contained in *Monthly Climatic Data for the World* and other sources.

REFERENCE

1. James F. O'Connor, "The Weather and Circulation of January 1963," *Monthly Weather Review*, vol. 91, No. 4, Apr. 1963, pp. 209–217.